

For Research Use Only

# SIRT2 Polyclonal antibody

Catalog Number: 19655-1-AP

Featured Product

74 Publications



## Basic Information

### Catalog Number:

19655-1-AP

### Size:

150ul, Concentration: 700 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG7756

### GenBank Accession Number:

BC003547

### GeneID (NCBI):

22933

### UNIPROT ID:

Q8IXJ6

### Full Name:

sirtuin (silent mating type information regulation 2 homolog) 2 (S. cerevisiae)

### Calculated MW:

43 kDa

### Observed MW:

37-45 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:5000-1:50000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

## Applications

### Tested Applications:

WB, IHC, IP, ELISA

### Cited Applications:

WB, IHC, IF, IP, CoIP, RIP

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat, monkey, zebrafish, bovine, goat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB**: mouse brain tissue, human brain tissue, rat brain tissue

**IP**: mouse brain tissue,

**IHC**: rat brain tissue, human skeletal muscle tissue, mouse brain tissue, human heart tissue

## Background Information

The Silent Information Regulator (SIRT2) family of genes is a highly conserved group of genes that encode nicotinamide adenine dinucleotide (NAD)-dependent protein deacetylases, also known as Class III histone deacetylases. The first discovered and best characterized of these genes is *Saccharomyces cerevisiae* SIRT2, which is involved in silencing of mating type loci, telomere maintenance, DNA damage response, and cell aging (10545947). SirT2, a mammalian homolog of Sir2, deacetylates  $\alpha$ -tubulin at Lys40 and histone H4 at Lys16 and has been implicated in cytoskeletal regulation and progression through mitosis (12620231,16648462). SirT2 protein is mainly cytoplasmic and is associated with microtubules and HDAC6, another tubulin deacetylase (12620231). Deacetylation of  $\alpha$ -tubulin decreases its stability and may be required for proper regulation of cell shape, intracellular transport, cell motility, and cell division (12620231,10966460). The abundance and phosphorylation state of SirT2 increase at the G2/M transition of the cell cycle, and SirT2 relocates to chromatin during mitosis when histone H4 Lys16 acetylation levels decrease (16648462,12697818). Overexpression of SirT2 prolongs mitosis, while overexpression of the CDC14B phosphatase results in both decreased phosphorylation and abundance of SirT2, allowing for proper mitotic exit (12697818). Thus, the deacetylation of both histone H4 and  $\alpha$ -tubulin by SirT2 may be critical for proper chromatin and cytoskeletal dynamics required for completion of mitosis. This antibody recognizes the 37-45 KD SIRT2 proteins. This antibody is a specific antibody that it can't detect signal with SIRT2-KO samples.

## Notable Publications

Author	Pubmed ID	Journal	Application
Xiaodan Sun	31572453	Front Genet	IHC
Min Liu	28871079	Nat Commun	WB
Kelly A Chamberlain	34506725	Neuron	WB,IF

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

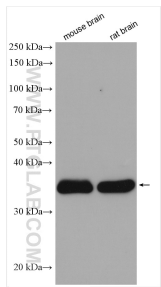
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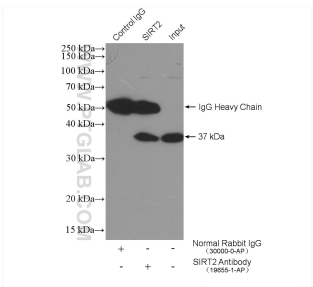
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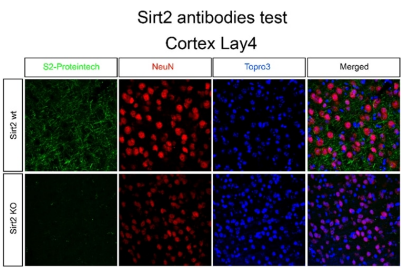
Selected Validation Data



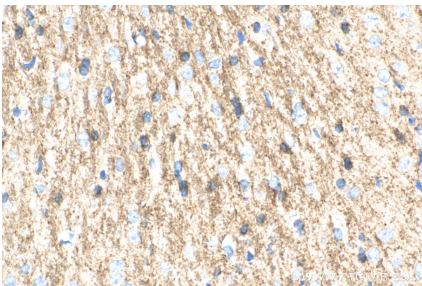
Various lysates were subjected to SDS PAGE followed by western blot with 19655-1-AP (SIRT2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



IP result of anti-SIRT2 (IP:19655-1-AP, 4ug; Detection:19655-1-AP 1:800) with mouse brain tissue lysate 4000 ug.



IF results of SIRT2 (19655-1-AP) antibody with cortex slides of SIRT2-WT and SIRT2-KO samples.



Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 19655-1-AP (SIRT2 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).